

AFCI-ID

MEMORANDUM FOR Chiefs, Primary and Special Staff Agencies

SUBJECT: Headquarters, Forces Command (HQ FORSCOM) Commercial Off-the-Shelf Software Purchase and Application Development

1. References:

a. Army Regulation 25-1, Army Knowledge Management and Information Technology Management, 30 June 2004.

b. Army Regulation 25-2, Information Assurance, 14 November 2003.

c. Department of Defense 8510.1-M, Department of Defense Information Technology Security Certification and Accreditation Process (DITSCAP) Application Manual, 31 July 2000.

2. The Deputy Chief of Staff, G-6 has the mission to provide software and database services for HQ FORSCOM. The G-6 recognizes that resources may not always be readily available to meet staff requirements. Therefore, the following policy guidance is provided for commercial software purchases or custom application activities initiated outside the G-6.

3. Prior to initiating purchase or development activities, the requiring agency will identify the project requirements and timelines to their Information Management Officer (IMO). The IMO will validate the need and facilitate a meeting with the G-6, Command Data Support Branch. If the G-6 determines that resources are not available to meet the requirements, the agency may initiate commercial software purchase or custom application activity with coordination and guidance from the G-6. Requirements exceeding \$25K Operation and Maintenance Army funding requires preparation by the funding staff element of an Army Knowledge Management (AKM) Goal 1 waiver for submission to Headquarters, Department of the Army Chief Information Officer/G-6.

4. Development activities are categorized as follows:

a. Design. In the application and database design phase the developer gathers requirements; identifies the tool set to employ; designs the overall application solution; and identifies the data required to support the expected solution. With G-6 assistance, a data model is developed and the database designed.

AFCI-ID

SUBJECT: Headquarters, Forces Command (HQ FORSCOM) Commercial Off-the-Shelf Software Purchase and Application Development

b. **Development.** During this phase, the application is generated using the development database tables. Testing is accomplished by the developer. The required security documentation, a Software Test and Evaluation (ST&E), is drafted and provided to the G-6 Information Assurance Security Officer. The format for the ST&E documentation can be found at <https://freddie.forscom.army.mil> and then click on Web Policy.

c. **Testing.** Testing involves a limited set of end users accessing the application and database in the development environment. The application is reviewed for regulatory compliance.

d. **Deployment.** Review and approval of the ST&E, along with the System Security Authorization Agreement (SSAA), results in an Interim Authority to Operate (IATO) or Authority to Operate (ATO). With this IATO/ATO, the application and databases are deployed to production resources. Upon deployment, the capability is available to authorized users.

5. Additional information for each of the phases is at enclosure 1. Enclosure 2 provides approved development tools and databases. A checklist for each development phase is at enclosure 3.



3 Encls

DAVID D. McKIERNAN
Lieutenant General, USA
Deputy Commanding General/
Chief of Staff

Software and Database Development Guidelines

The following are guidelines to manage the development and/or deployment of applications within Headquarters, Forces Command (HQ FORSCOM):

1. Application and database design.

1.1 The developer will confer with FORSCOM G-6 personnel who will advise in the design ensuring compliance with established standards, policies and procedures.

1.2 The design process begins with the Data Management Group who builds a data model of the application's supporting database, determines if standard data elements and data definitions exist, and identifies any new data elements. Required data interfaces with external systems are identified. A Systems Interface Agreement may be required for external interfaces.

1.3 A Data Modeler will ensure the database is modeled to the appropriate normal form, establish table relationships and business rules as needed. The database is then built within the framework of the Erwin data-modeling tool.

1.4 Once the design process is complete, the database is initially deployed on a development server. There will be two userids issued. Both will be database level userids, not server level userids.

1.4.1 One userid will be assigned to the developer of the application. The permissions granted to the development userid will allow the developer to create views, write procedures and functions. All requests to change the database structure will be reviewed prior to applying the changes to the database.

1.4.2 The second userid will be assigned to the developer, but the level of privileges will be limited to only what an application end user will need to access the application and its database. This userid can be used to test the application during the development stage and will be carried over to the production environment.

2. Application Development.

2.1 The FORSCOM standard application programming language and runtime environment is Sun Microsystems' Java. As an alternative, applications can be developed and deployed using the Microsoft .NET Platform. Other permissible tools and products are at enclosure 2.

2.2 Any other programming language, development tool or runtime platform must be approved by G-6. A licensed copy must be provided to the Network

Services Branch, Command and Control Support Division, G-6 for integration and security testing. The proponent organization of the software will be responsible for the cost(s) associated with any third party software and training of G-6 personnel tasked to maintain and/or administer the system.

2.3 When possible, applications requiring database support will be developed using the FORSCOM Enterprise Oracle Relational Database Management System (RDBMS). Other permissible RDBMS are at enclosure 3. The developer will coordinate with the Command Database Support Database Administrators for table space, database schema and data normalization.

2.4 All applications will implement controls to protect against compromise of any collected data, unauthorized access or use in accordance with (IAW) applicable information assurance/security policies and regulations.

2.5 All web based applications will authenticate against Army Knowledge Online (AKO) Lightweight Directory Access Protocol (LDAP) and/or be deployed on a server using Single Sign On against AKO LDAP.

2.6 All applications will prominently display Privacy Act and/or Security Statement on at least the first page of the application.

2.7 All applications will be in compliance with the provisions of Section 508 of the Rehabilitation Act Amendments of 1998.

3. Product Testing.

3.1 The developer will identify a sufficient number of end users to test the application against the requirements identified and coordinate with the DBAs for user access.

3.2 The application and databases will be reviewed by appropriate FORSCOM G-6 personnel for policy and regulatory compliance, security vulnerabilities, reliability, performance, compatibility and integration issues.

3.3 The developer will ensure all infractions, anomalies, and items found not in compliance with the applicable governing standards are corrected before the application is deployed into production.

4. Deployment.

4.1 All software must be accredited IAW the Department of Defense Information Technology Security Certification and Accreditation Process and have an Interim Approval To Operate or Approval To Operate before deployment into a production environment. The application may also require registration in the

Army Information Technology Registry. The developer is responsible for initiating action on these requirements and providing follow-up as required.

4.2 When the testing process is completed, the developer will coordinate the move of the development database and application into the production environment. The development environment will be retained for future development and/or applications modifications. All changes will be applied to the development application/databases and tested prior to changing the production environment.

4.3 The developer shall provide FORSCOM G-6 the application source code, a compiled version of the application, and all documentation associated with the application and its database.

Approved Tools and Database Management Software

Web Development	FrontPage, Visual Studio.Net, Dreamweaver, Java, Eclipse, STRUTS, Tomcat Version 4.0 or higher
Source Code Library	CVS
Reporting Software	Adobe Acrobat, COGNOS Impromptu, COGNOS ReportNet
Query Software	COGNOS Query
OLAP	COGNOS Powerplay
Databases	ORACLE, SQL Server (Unclassified), Sybase (Classified)
Scripting	Visual Basic, SQL, Java
Desktop Development	MS Access
GIS Software	ESRI
Collaboration	MS SharePoint, Captaris Workflow

Application and Database Development Checklist

Application and Database Design:

- ☐ Confer with Forces Command G-6 personnel who will advise in the design ensuring compliance with established standards, policies and procedures.
- ☐ Prepare Army Knowledge Management Goal 1 Waiver if cost exceeds \$25K Operations and Maintenance Army funding.
- ☐ Build a data model of the application's supporting database, determine if standard data elements and data definitions exist, and identify any new data elements.
- ☐ Ensure the database is modeled to the appropriate normal form.
- ☐ Establish table relationships and business rules, as needed.
- ☐ Development userid assigned with sufficient privileges that allow the developer to create views, write procedures and functions.
- ☐ Application userid assigned to the developer with restrictive privileges to allow only what an application end user will need to access the application and its database.

Application Development:

- ☐ Uses FORSCOM approved programming language, development and runtime environment.
- ☐ Application uses FORSCOM enterprise Oracle Relational Database Management System or a FORSCOM approved data store.
- ☐ Application implements controls to protect against compromise of any collected data, unauthorized access or use in accordance with applicable information assurance/security policies and regulations.
- ☐ Application authenticates against Army Knowledge Online (AKO) Lightweight Directory Access Protocol (LDAP) and/or will be deployed on a server using Single Sign On against AKO LDAP.
- ☐ Application prominently displays Privacy Act and/or Security Statement on at least the first page of the application.

- ☐ Application in compliance with the provisions of Section 508 of the Rehabilitation Act of 1998.

Product Testing:

- ☐ End user has tested and accepted.
- ☐ Application reviewed and tested for:
 - Policy and regulatory compliance
 - Security vulnerabilities
 - Reliability
 - Performance
 - Compatibility
 - Integration
- ☐ User and technical documentation completed.

Deployment:

- ☐ Product has an Interim Approval To Operate or Approval To Operate.
- ☐ Product has been registered in the Army Information Technology Registry.
- ☐ Developer coordinated the move of the development database and application into the production environment.

The FORSCOM G-6 has been provided the application source code, a compiled version of the application, or a licensed copy of the Commercial Off-the-Shelf Software, and all documentation associated with the application and its database.